U. S. Marine Corps Forces Pacific
POL Issues & Initiatives

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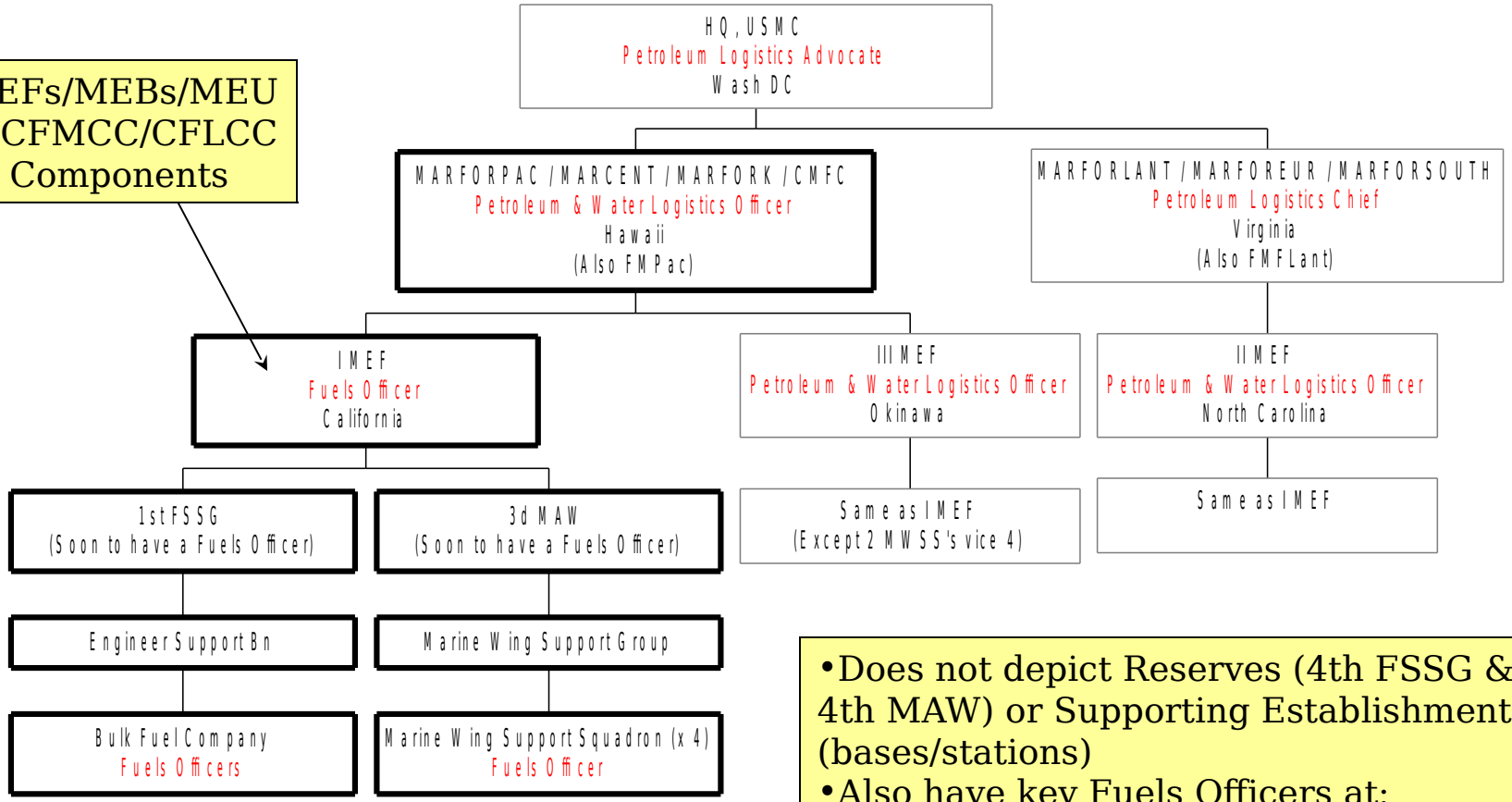
Briefing Topics

1. MARFORPAC Fuel Structure
2. Issues
   - Hose Reel Systems
   - Tanker Truck Replacements
3. Initiatives
   - D-Day Mobile Fuel Delivery (DMFD)
   - Fuel Requirements Fore-casting Study/Capability

MARFORPAC Fuel Structure

MEFs/MEBs/MEUs: CFMCC/CFLCC Components



- Does not depict Reserves (4th FSSG & 4th MAW) or Supporting Establishment (bases/stations)
- Also have key Fuels Officers at:
  - Naval Petroleum Office, Virginia
  - USA Quartermaster Center, Virginia
  - Marine Corps Systems Command, Virginia

Amphibious Assault Fuel System

2" Hose

Dispensing Assy

To TAFDS (EAF)

4" Hose

Tactical Fuel Storage Assy's:
20,000 gal tanks
50,000 gal tanks

6" Hose

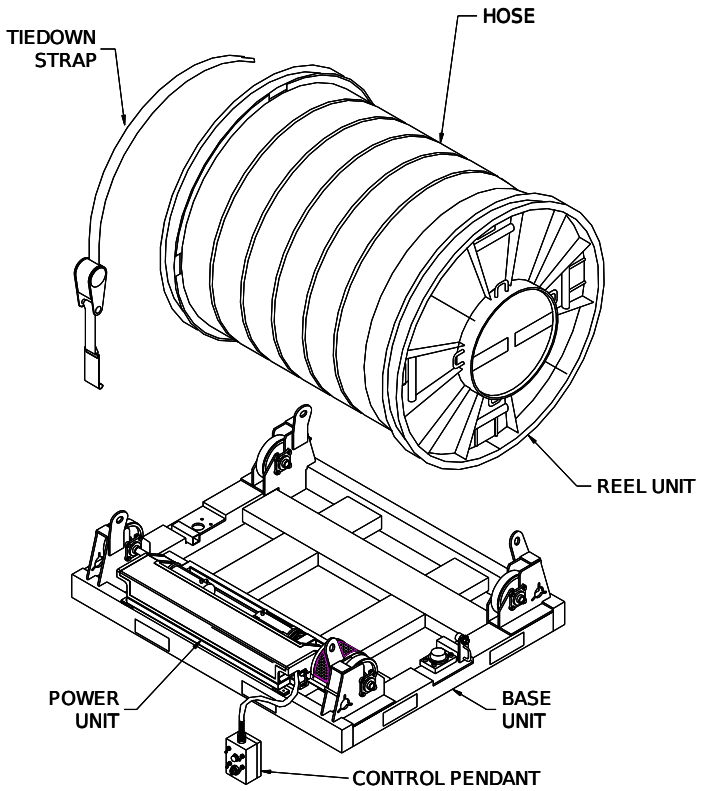
Booster Assy's

Beach Unloading Assy

Receiving Assy

Hose Reel Systems

- A complete 5-mile HRS consists of:
  - 2 Base Units
  - 2 Power Units
  - 1 Interconnection Kit
  - 11 Hose Reels, each consisting of:
    - One reel
    - Four 600-foot hose sectio
- HRS Cost: $281,245



Hose Reel Systems

- Hose laid at 2.5 mph (powered) or 5 mph (manual)
- Hose retrieved at .5 - 1.5 mph (powered)
- Powered by host vehicle via standard NATO plug. Plug also allows connection to 30, 60, and 100 kilowatt generators.
- One HRS system packs out in four ISO containers

Hose Reel Systems

Base Unit

Interconnection Kit

Power Unit

Control Pendant

Hose Reel Systems

- Issue: Heavy use, perhaps too heavy, planned in both theaters:
  - HRS is not an additional capability; it was procured to replace 6” AAFS hose sections (see next slide)
  - Limited current supply: 145 miles total
    - Maritime Prepositioning Ship Squadrons (MPSRON): 65 miles
    - Operating Forces: 50 miles
    - Reserves/Training: 30 miles
  - Limited survivability: about 30 days of heavy use
  - Pumps and tanks from AAFS systems are used for extended HRS traces; net loss of AAFS availability

Systems/Company Comparison

AAFS SYSTEMS COMPARISON				
Item			**Pre-Reconfig**	**Current**
Bulk Fuel Co Qty			8	4
Storage Capacity (Gals)	Per System		600,000	1,120,000
	Total BF Co		4,800,000	4,480,000
6" Capability	6" x 50' Hose Qty / Distance	Per System	380 / 3.6 mi	60 / 0.6 mi
		Per BF Co	3040 / 28.8 mi	240 / 2.3 mi
	Hose Reel Qty / Distance	Per System	0	1 / 5 mi
		Per BF Co	0	4 / 20 mi
	Total 6" Distance	Per System	3.6 mi	5.6 mi
		Per BF Co	**28.8 mi**	**22.4 mi**

- Net loss of 6” capability in each USMC Bulk Fuel Company, however…
- Significantly enhanced transportation, storage, laying and retrieval capability

Tanker Truck Replacements

- Issue: Increasing M970 age, declining reliability
- Limited spare parts availability
- Impacts readiness

M931/M970

SIXCONs

Tanker Truck Replacements

- Two replacement vehicles to target missions:
  - Aviation Refueling Capability (ARC) in MWSSs at air bases (inc. tactical)
  - Flatrack Refueling Capability (FRC) in MWSSs and Transportation Support Battalions for off road distribution and dispensing

ARC

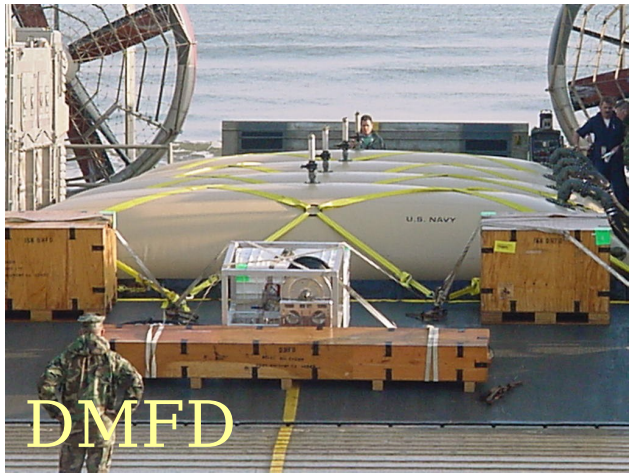
FRC ON LVSR

Tanker Truck Replacements

- Some ARCs fielded (IOC FY-03, FOC FY-04)
- Remaining 38 ARCs: POM-04
- First FRC IOC FY-08, FOC FY-10
- Ongoing debate: Logistics Vehicle System Replacement (LVSR) for fuel/ammo/bridging heavy lift vs. Medium Tactical Vehicle Replacement (MTVR) variants capability

DMFD Demonstration

- 15,000 gallon loaded on LCAC (DMFD 15K)
- 3,000 gallon system loaded on an LVS truck (DMFD 3K)
- 400 gallon modular system loaded on an LVS truck (DMFD 400G)



DMFD Demonstration

- DMFD 15K: Easiest to use, largest payload, lowest storage cube and weight to capacity ratios
- DMFD 3K: Combines high payload and flexibility, limited dispensing capability, requires LVSR
- DMFD 400G: Most flexibility, least payload, most complex

Fuel Requirements Forecasting

- DoD-wide need for increased capability
- MARCENT requested a study to identify requirements, methodology and automated process to accurately forecast fuel requirements
- U.S. Marine Corps' Combat Development Command (MCCDC) developing scope of work to initiate study
- Starting point: JCS J-4/DESC meeting early 2000?
- Concurrent material solution being pursued

Summary

- USMC Hose Reel Systems have limitations. They are not theater distribution assets and should not be planned for use as such.
- The Marine Corps is working steadily to improve tanker truck fuel distribution capabilities.
- Amphibious assault fuel delivery is an area where MARFORPAC will continue to explore options.
- MARFORPAC will team with any and all interested parties to solve fuel requirements forecasting challenges.